

NMR Spectroscopy

Make: Bruker

Model : Avance III HD 400 MHz

Applications:

Molecular Structure determination. Structure and atomic arrangements in molecules and crystals can be investigated. Kinetic and temperature studies of reaction mixtures.

1D-NMR: ¹H, ¹³C, ³¹P, ¹⁹F, DEPT-135, DEPT-90, DEPT-

45, 1D_NOESY, Water Suppression, VT Temperature

2D-NMR: *HOMO: NOESY, COSY, TOCSY

***HETERO: HSQC, HMBC**

Specifications:

UltraShield™ Plus 9.4T magnet

- **5 mm BBFOPLUS probe, optimized for X-nuclei direct observation. Broadband in a frequency range between ³¹P and ¹⁵N. This probe has 2H "lock" channel and z gradient that allows us to carry out 2D spectroscopy and hetero correlation ¹⁹F/¹H and ¹H/¹⁹F.**
- **Control temperature unit (from -50 °C to 50 °C).**
- **Condenser: Achromatic strain-free condenser**
- **Compensator: Quartz wedge lambda tint plate and bedeck.**
- **Reflected illuminated: Attached with halogen illumination lamp 100w halogen illuminated with external power supply incident light**
- **Polarizer 360 deg rotatable analyser with filler Organic compounds, Pharmaceuticals and Drugs.**



Method/Condition		Tariff for NITW Students	External Academic (18 % GST Extra)	Industry (18 % GST Extra)
		Per Sample	Per Sample	Per Sample
1H NMR	CDCL ₃	₹ 100	₹ 400	₹ 800
1H NMR	DMSO-d ₆ and other solvents	₹ 200	₹ 500	₹ 1000
1H NMR	D ₂ O for deuterium exchange	₹ 200	₹ 800	₹ 1200
13 C NMR	CDCL ₃	₹ 200	₹ 600	₹ 2800
13 C NMR	DMSO-d ₆ and other solvents	₹ 300	₹ 1200	₹ 4500